

APPLICANT: EITAN, Boaz  
SERIAL NO.: 09/966,754  
FILED: October 1, 2001  
Page 2

#### **AMENDMENTS TO THE CLAIMS**

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently amended) A method of fabricating an oxide-nitride-oxide (ONO) layer in a memory cell, said method comprising:
  - forming a bottom oxide layer on a substrate;
  - depositing a nitride layer; and
  - oxidizing a top oxide layer, thereby causing oxygen to be introduced into substantially all of said nitride layer within said memory cell, so as to restrict lateral movement of charge enhance charge localization within said nitride layer.
4. (Currently amended) A method for improving the charge retention in a nitride layer of a memory cell, said method comprising:
  - depositing a nitride layer; and
  - introducing oxygen into substantially all of said nitride layer within said memory cell, so as to restrict lateral movement of charge enhance charge localization within said nitride layer.
5. (Currently amended) A method for improving the charge retention in a nitride layer of a memory cell, said method comprising:
  - depositing a nitride layer;
  - controlling the thickness of said deposited nitride layer; and
  - introducing oxygen into substantially all of said nitride layer within said memory cell, so as to restrict lateral movement of charge enhance charge localization within said nitride layer.
7. (Currently amended) A method of manufacturing a programmable, read only memory device, the method comprising:
  - forming a first oxide layer on a substrate,

APPLICANT: EITAN, Boaz  
SERIAL NO.: 09/966,754  
FILED: October 1, 2001  
Page 3

forming a nitride layer on top of said oxide layer, wherein said nitride layer is 150 angstroms or less thick;

introducing oxygen into substantially all of said nitride layer within a memory cell during formation of a second oxide layer on top of said nitride layer, so as restrict lateral movement of charge ~~enhance charge localization~~ within said nitride layer;

patterning said oxide-nitride-oxide (ONO) layers into desired patterns; and forming a gate layer over said patterned ONO layer.

8. (Previously presented) A method according to claim 7 and wherein said first oxide layer is approximately 50 – 150 angstroms thick.

9. (Previously presented) A method according to claim 7 and wherein said first oxide layer is approximately 80 angstroms thick.

10. (Previously presented) A method according to claim 7 and wherein said nitride layer is approximately 20 – 150 angstroms thick.

11. (Previously presented) A method according to claim 7 and wherein said second oxide layer is approximately 50 - 150 angstroms thick.

12. (Previously presented) A method according to claim 7 and wherein said forming said second oxide layer comprises consuming a portion of said nitride layer.

13. (Withdrawn) A programmable, read only memory device comprising:  
two diffusion areas in a substrate and a channel formed therebetween;  
an ONO layer at least over said channel comprising:  
a first oxide layer;  
a substantially oxygenated nitride layer having a thickness of 100 angstroms or less overlaying said first oxide layer; and  
a second oxide layer overlaying said nitride layer,

APPLICANT: EITAN, Boaz  
SERIAL NO.: 09/966,754  
FILED: October 1, 2001  
Page 4

said first and second oxide layers having a thickness that is the same order of magnitude as said nitride layer; and  
a gate at least above said ONO layer.